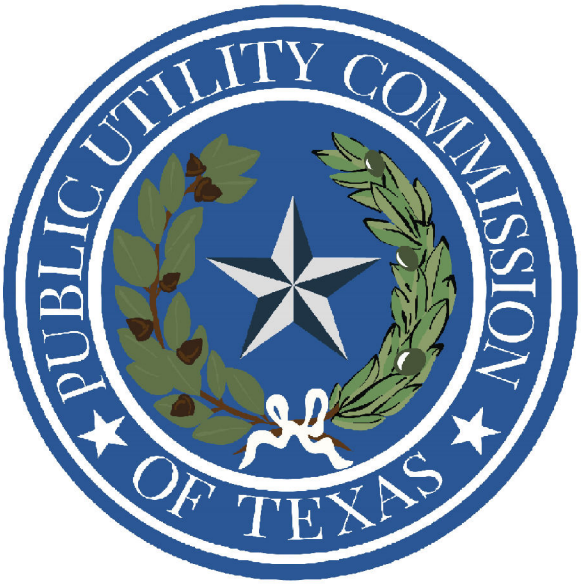

Filing Receipt

Received - 2021-08-16 02:12:26 PM
Control Number - 52373
ItemNumber - 31

PROJECT NO. 52373

REVIEW OF WHOLESALE ELECTRIC MARKET DESIGN	**§ §**	**PUBLIC UTILITY COMMISSION OF TEXAS**

PROJECT NO. 52268

CALENDAR YEAR 2021 – WORKSHOP AGENDA ITEMS WITHOUT AN ASSOCIATED CONTROL NUMBER	**§ § § §**	**PUBLIC UTILITY COMMISSION OF TEXAS**

COMMENTS OF ALISON SILVERSTEIN ALISON SILVERSTEIN CONSULTING

COMES NOW Alison Silverstein of Alison Silverstein Consulting and files these Comments in response to issues pertaining to ERCOT market design and the Commission's Questions for Comment filed in this proceeding on August 2, 2021.

Executive Summary

Energy efficiency and demand response are integral to improving and protecting the reliability and resiliency of the ERCOT grid, improving wholesale market operation and outcomes, and protecting the health and economic well-being of all Texans. Redesigning ERCOT's supply-side market provisions will not assure effective market operation nor cure our reliability challenges. Energy efficiency and demand response are highly effective and cost-competitive ways to address ERCOT reliability and the Commission should address them in concert with market changes, not as a belated afterthought.

Introduction

As directed by statute, the Commission is now working to determine how to modify ERCOT's wholesale electric market design to improve resource adequacy and power system reliability for all seasons and operating conditions. But electric resource adequacy and reliability

necessitate the balancing and management of supply and demand, not just the modification of supply measures to meet and surpass whatever levels demand may reach. This means that the Commission's goal of improving resource adequacy and reliability will not be achieved if we only modify market rules and associated requirements to address the supply side of the resource adequacy equation – we must address ERCOT's customer needs and demands as well, as noted by five former Public Utility Commission of Texas chairs and commissioners in their "Never Again" recommendations.[1]

The electricity disaster that occurred in February 2021 was due in part to the staggering spike in electricity demand caused by Arctic weather hitting millions of Texas homes with insufficient insulation and poor building shell integrity and old, inefficient electric and gas heaters.[2] [3] Over four to five days of electric outages, these energy-wasteful conditions exacerbated the widespread misery, health problems and property damage experienced by millions of Texans.

Energy efficiency and demand response are critical for ERCOT reliability and resilience for many reasons,[4] including:

- Sustained, large-scale energy efficiency improvements to homes, businesses and appliances that consume electricity during peak and net peak periods – particularly air conditioners, electric heaters, electric water heaters, pool pumps, lighting, and electric vehicle charging – can reduce and stabilize peak loads, reduce unexpectedly high electric

[1] Pat Wood III, Robert W. Gee, Judy Walsh, Brett Perlman, Becky Klein & Alison Silverstein, "Never Again: How to Prevent Another Texas Electricity Failure," (June 2021).
[2] See, e.g., analyses by Prof. Lucas Davis, "The Texas Power Crisis, New Home Construction, and Electric Heating," and "Can Energy Efficiency Help Avoid Blackouts?".
[3] See ERCOT peak demand and load forecast error charts in "ERCOT Monthly Operational Overview, February 2021," (March 2021).
[4] See, Alison Silverstein, "How Texas can unleash the next wave of electricity market competition," (May 2020) and Alison Silverstein, "Fix Texas reliability, and hurry!", (July 12, 2021).

demand surprises, and thereby reduce the amount of resources needed to serve those loads.

- Sustained, large-scale energy efficiency improvements are less costly and perform more reliably than comparable generation resources.
- Demand response and distributed behind-the-meter resources, particularly when enabled by automating technologies and widely available price and grid need information, improves grid reliability by giving customers more ways to reduce their own electricity use and provide fast, verifiable reliability-enhancing ancillary services. These offer valuable grid operations tools for the ERCOT grid operator at the same time that they limit generators' power to raise the real-time cost of electricity.
- Sustained, large-scale energy efficiency improvements improve power system resilience and reduce the adverse consequences of power system failure for Texas citizens by keeping their homes warmer in winter, cooler in summer, and lowering energy bills year-round.

Although Texas was the first state in the nation to adopt an energy efficiency resource standard, our energy efficiency requirements for utilities and for building and appliance efficiency now lag well behind many other states[5] and waste huge amounts of Texans' energy and dollars. Texas TDU energy efficiency goals have not been raised in ten years, even though the breadth and value of energy-saving opportunities have increased markedly over that time. Texas utility energy efficiency programs spent only $6.77 per capita in 2019, far below the national median of $15.12, trailing our neighbors in Oklahoma ($17.34), Arkansas ($22.52) and New Mexico ($15.12).[6] Reports prepared for the U.S. Department of Energy estimated that

[5] See ACEEE State Energy Efficiency Scorecard 2020 and Texas State Scorecard.
[6] Ibid.

Texas could use energy efficiency measures to reduce our electricity use by at minimum 44,000 GWh (8.5% of baseline estimated use) by 2040 before the use of new technologies and deeper efficiency strategies that could yield at least 40% additional savings.[7] The American Council for an Energy Efficient Economy finds energy efficiency to be a less expensive resource on a Levelized Cost of Energy basis than all generation options.[8]

Large, market-affecting, reliability-protecting investments in energy efficiency and demand response rarely occur organically through the actions of individual customers. This is because most energy efficiency and demand response measures require investments of time and money to identify and implement savings opportunities. But energy efficiency and demand response are public goods, delivering benefits to all – as from more stable electric demand, more survivable homes, and disciplining generators' ability to raise market prices – far in excess of their individual and collective costs. For this reason, the Commission should aggressively strengthen and expand Texas TDUs' energy efficiency requirements and funding as a way to protect and enhance grid reliability and the ERCOT wholesale market for all Texans.

Comments

The comments below do not address all of the questions raised in the Commission's August 2, 2021 memo.

1. What specific changes, if any, should be made to the Operating Reserve Demand Curve (ORDC) to drive investment in existing and new dispatchable generation? Please consider ORDC applying only to generators who commit in the day-ahead market (DAM). Should that amount of ORDC-based dispatchability be adjusted to specific seasonal reliability needs?

[7] EPRI, "U.S. Energy Efficiency Potential Through 2040," (2019).
[8] Maggie Molina (ACEEE), "Renewables are getting cheaper, but energy efficiency, on average, still costs utilities less," (December 18, 2018).

ORDC pricing should be available to demand-side and storage resources that deliver verifiable load reductions in real-time, not just to generators.

2. Should ERCOT require all generation resources to offer a minimum commitment in the day-ahead market as a precondition for participating in the energy market?
a. If so, how should that minimum commitment be determined?
b. How should that commitment be enforced?

No, ERCOT should not require a minimum commitment in the DAM as a prerequisite for participating in the real-time energy market, nor should it limit real-time market participation to generation resources only (as implied by the above question). Such a requirement might enhance predictability yet dissuade generators, storage and demand response providers from scrambling to offer unplanned yet reliability-enhancing resources into the real-time market (as through expedited maintenance, modified storage recharge schedules, or quickly starting up distributed generation and storage and turning down electricity use in response to high real-time prices.

3. What new ancillary service products or reliability services or changes to existing ancillary service products or reliability services should be developed or made to ensure reliability under a variety of extreme conditions? Please articulate specific standards of reliability along with any suggested AS products. How should the costs of these new ancillary services be allocated.

All ancillary services should be defined in performance- and functionally-based, technology-agnostic, fuel-neutral terms. Performance requirements and ancillary service acquisition or cost allocation requirements should be similarly neutral – for instance, if the Commission feels it is appropriate to charge a renewable generator for failing to produce at its predicted level during a grid emergency, it must levy the same charges upon a coal- or natural gas-fired plant if that generator fails to deliver previously committed production levels.

4. Is available residential demand response adequately captured by existing retail electric provider (REP) programs? Do opportunities exist for enhanced residential load response?

No, existing REP programs do not capture all of the existing residential demand response available, and yes, this could be enhanced. Residential DR levels could be enhanced by allowing more latitude for energy service aggregators to participate in the ERCOT market and to sell their services directly under multi-year contract to TDUs as part of the TDU energy efficiency programs.

Conclusion

I appreciate the opportunity to provide these Comments and look forward to working with the Commission and other interested parties on these issues.

Respectfully submitted,

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